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# **Bryophyte Taxa Lists of the High Alaskan Arctic**

by

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**March 1972**



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Columbus, Ohio 43212

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#### ABSTRACT

Bryophytes reported previously in the literature are listed for northern Alaska. The geographical area includes the Arctic Coastal Plain and the northern foothills and slopes of the Brooks Range, approximating the area designated the Alaskan Arctic Slope. Annotations concerning reported nomenclatural changes are given for selected taxa. Separate taxa lists are included for five localities designated as Anaktuvuk Pass, Lake Peters, Meade River, Point Barrow, and Umiat. A total of 232 taxa are included.

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## INTRODUCTION

The geographical area in which the bryophyte taxa listed in this report occur includes the Arctic Coastal Plain and the northern foothills and slopes of the Brooks Range, from Cape Lisburne in the west to the Canadian boundary in the east. The southern limit of the area treated runs approximately east-west through the Brooks Range, veering northeastward near the Canadian boundary. This area has been referred to as the Arctic Coast District, which is one of the eleven Alaska-Yukon Territory floristic districts established by E. Hult  n and subsequently adopted by Persson (1946-1963). The Arctic Coast District approximates the area designated the Alaskan Arctic Slope by Wiggins and Thomas (1962), except that the Alaskan Arctic Slope includes the watershed of the Kukpuk River, the coastal regions from Point Hope to Cape Thompson, and the upper regions of the Wulik, Kugururok, and Noatak Rivers in the southern slopes of the DeLong Mountains. Bryophytes reported for these areas, the southern slopes of the Brooks Range, and southward in Alaska are not included in this report.

Many investigators have made significant contributions to our knowledge of the bryology of the high Alaskan Arctic by their important collections or taxa lists. The numerous publications of H. Persson and W. C. Steere are among the most extensive recent primary sources of information. Their reports often include habitat information, associated plant taxa, and bryogeographical assessments for selected taxa. Except for taxonomic and bryogeographical work, there appear to have been few studies of other aspects of the bryology of the high Alaskan Arctic to date. Steere (1954a) determined the chromosome numbers of 56 mosses, some of

which were collected in the vicinities of Cape Lisburne, Meade River, and Point Barrow, and he recorded the microclimatic temperature of a high-center polygon near Barrow during June and July 1953. Although it was not used as a source for the bryophyte taxa listed in this report, the important ecological study by A. W. Johnson and his co-workers (1966) of the vegetation and edaphic factors of the Cape Thompson region should be mentioned.

The present lists of bryophytes were compiled from the literature. A total of 232 taxa are included, consisting of 40 leafy liverworts, 5 thalloid liverworts, 12 sphagnum mosses, 124 acrocarpous mosses, and 51 pleurocarpous mosses. Specimens were not examined by the author. Therefore, certain determinations must be verified and the taxonomic status of several taxa requires further evaluation. Some of the problem taxa are: Anisothecium (Dicranella) spp.; Bryobrittonia pellucida; Bryum ovatum; Dicranum bonjeanii; Hylocomium alaskanum; Pogonatum alpinum; Polytrichum affine; Pottia obtusa; and Pottia obtusifolia. Nomenclatural changes were noted in several bryological works, including those of Arnell (1956); Crum, Steere, and Anderson (1965a, 1965b); Koponen (1968); Lawton (1971); Nyholm (1954-69); and Schuster (1966, 1969). These changes and other notations are given in the two lists of annotations.

#### THE LISTS OF TAXA

The taxa in the first and second lists belong to the two classes of the Bryophyta (bryophytes), the Hepaticae (liverworts) and the Musci (mosses), respectively. The subordinate taxa within these two classes are grouped on the basis of morphological type: leafy liverworts and thalloid liverworts in the Hepaticae, and sphagnum mosses, acrocarpous mosses, and pleurocarpous mosses in the Musci. Within these morphological categories, the taxa are listed alphabetically by family, genus, species, and subspecies (subsp.) or variety (var.). Annotations are cited in brackets by roman letters for the Hepaticae and by arabic numerals for the Musci.

Five additional lists of taxa are provided for selected localities (Anaktuvuk Pass, Lake Peters, Umiat, Meade River, and Point Barrow). These geographical designations should be taken as the general vicinities in which the bryophytes were collected. For example, some of the taxa listed under Point Barrow were collected in the greater Barrow area, not at Point Barrow itself.

The format is similar to that described above, except for the exclusion of families. Thus, within the various morphological categories, taxa are listed alphabetically by genus, species, etc. The roman letters and arabic numerals in brackets refer to the annotations as mentioned earlier.

The Appendix consists of an alphabetic list of the bryophyte specific and infraspecific taxa, and literature references are cited for each.

CLASS HEPATICAE

I. LEAFY LIVERWORTS

Elepharostomaceae

Elepharostoma

E. trichophyllum (L.) Dumort.

Lepicolea

L. fryei Perss. [A]

Calypogeiaceae

Calypogeia

C. sphagnicola (S. Arnell &  
Perss.) Warnst. & Loeske

Cephaloziaceae

Cephalozia

C. media Lindb.

C. pleniceps (Aust.) Lindb.

Cephaloziellaceae

Cephaloziella

C. arctica Bryhn & Douin

C. divaricata (Franc) Schiffn.

C. subdentata Warnst.

Frullaniaceae

Frullania

F. jackii subsp. japonica

(Sande Lac.) Hatt., In

Steere, 1965

Frullania (Cont'd)

F. tamarisci (L.) Dumort.

Herbertaceae

Herberta

H. adunca (Dicks.) S. F. Gray

Jungermanniaceae

Mylia

M. anomala (Hook.) S. F. Gray

Lejeuneaceae

Hygrolejeunea

H. alaskana Schust. & Steere

Lophocoleaceae

Chiloscyphus

C. pallescens (Ehrh.) Dumort.

Harpanthus

H. flotovianus Nees

Lophoziaceae

Barbilophozia [B]

B. barbata (Schmid) Dumort.

Leiocolea [B]

L. schultzii Joerg. [C]

Lophozia [B]

L. groenlandica (Nees)

Macoun

L. latifolia Schust.

Lophozia (Cont'd)

L. pellucida Schust.

L. ventricosa (Dicks.) Dumort.

Mesoptychia

M. sahlbergii (Lindb. & Arn.)

Evans

Orthocaulis [B]

O. binstaedii (Kaal.) Buch

O. kunzeanus (Hueb.) Buch

O. quadrilobus (Lindb.) Buch

Sphenolobus

S. minutus (Crantz) Steph. [D]

Temnoma

T. setiforme (Ehrh.) Howe [E]

Tritomaria

T. quinquedentata (Huds.) Buch

Plagiochilaceae

Plagiochila

P. arctica Bryhn & Kaal.

Porellaceae

Ascidiota

A. blepharophylla subsp.

alaskana Steere & Schust.

Ptilidiaceae

Ptilidium

P. ciliare (L.) Hampe

Radulaceae

Radula

R. complanata (L.) Dumort.

R. prolifera H. Arnell

Scapaniaceae

Diplophyllum

D. taxifolium (Wahlenb.)

Dumort.

Scapania

S. gymnostomophila Kaal.

S. irrigua (Nees) Dumort.

S. mucronata Buch

S. paludicola Loeske & K. Muell.

S. praetervisa Meylan [F]

S. simmonsii Bryhn & Kaal.

II. THALLOID LIVERWORTS

Aneuraceae

Riccardia

R. latifrons Lindb.

Cleveaceae

Clevea

C. hyalina (Sommerf.) Lindb. [G]

Marchantiaceae

Marchantia

M. alpestris Nees

M. polymorpha L.

Preissia

P. quadrata (Scop.) Nees

ANNOTATIONS (Hepaticae)

- A. Lepicolea fryei = Lophochaete fryei (Perss.) Schust., Ref.  
Schuster, 1966.
- B. Schuster (1969) has favored a conservative treatment of the genus  
Lophozia, thus the taxa Barbilophozia, Leiocolea, Lophozia, and  
Orthocaulis are reduced by him to subgenera of the genus Lophozia.
- C. Leiocolea schultzii = Lophozia (subg. Leiocolea) rutheana (Limpr.)  
Howe, Ref. Schuster, 1969.
- D. Sphenolobus minutus = Anastrophyllum (subg. Acantholobus) minutum  
(Schreb. ex Cranz) Schust., Ref. Schuster, 1969.
- E. Temnoma setiforme = Chandonanthus setiformis (Ehrh.) Lindb., Ref.  
Schuster, 1969.
- F. Scapania praetervisa = S. (subg. Euscapania) mucronata var.  
praetervisa (Meylan) Buch, Ref. Arnell, 1956.
- G. Probably Clevea hyalina = Athalamia hyalina (Sommerf.) Hatt. listed  
in Schofield (1968a) and Worley (1970).



CLASS MUSCI

I. SPHAGNUM MOSSES

Bartramiaceae

Sphagnaceae

Bartramia

Sphagnum

B. ithyphylla Brid.

S. aongstroemii C. Hartm.

B. pomiformis Hedw.

S. balticum (Russow) C. Jens.

Conostomum

S. fimbriatum Wils.

C. boreale Sw. [2]

S. fuscum (Schimp.) Klinggr.

Philonotis

S. girgensohnii Russow

P. tomentella Mol. [3]

S. imbricatum Russow

Bryaceae

S. lenense H. Lindb.

Bryum

S. rubellum Wils.

B. arcticum (R. Br.) B.S.G.

S. squarrosum Crome

B. argenteum Hedw.

S. subsecundum Nees

B. calophyllum R. Br.

S. teres (Schimp.) Ångstr.

B. cryophilum Mårt.

S. warnstorffianum Du Rietz [1]

B. inclinatum (Brid.) Bland. [4]

II. ACROCARPOUS MOSSES

B. nitidulum Lindb.

Aulacomniaceae

B. obtusifolium Brid. [5]

Aulacomnium

B. ovatum Jur., In Persson, 1962

A. acuminatum

[6]

(Lindb. & H. Arness) Par.

B. pallens Sw.

A. palustre (Hedw.) Schwaegr.

B. pseudotriquetrum (Hedw.)

A. turgidum

Schwaegr., In Persson, 1962

(Wahlenb.) Schwaegr.

[6]

B. salinum I. Hag. ex Limpr.

B. uliginosum (Brid.) B.S.G.

Leptobryum

L. pyriforme (Hedw.) Wils.

Pohlia

P. albicans

(Wahlenb.) Lindb. [7]

P. cruda (Hedw.) Lindb.

P. nutans (Hedw.) Lindb.

P. proligera (Kindb.) Lindb.

P. sphagnicola

(B.S.G.) Lindb. & H. Arnell

Catoscopiaceae

Catoscopium

C. nigritum (Hedw.) Brid.

Dicranaceae

Amphidium

A. lapponicum (Hedw.) Schimp.

A. mougeotii (B.S.G.) Schimp.

Anisothecium

A. crispum (Hedw.)

Lindb., In Persson, 1962 [8]

A. schreberianum (Hedw.)

Dix., In Persson, 1962 [8]

Cnestrum

C. schisti (Wg.) I. Hag. [9]

Cynodontium

C. alpestre (Wahlenb.) Milde

Dicranella

D. cerviculata (Hedw.) Schimp.

D. crispa (Hedw.) Schimp.

Dicranum

D. angustum Lindb.

D. bonjeanii De Not. [10]

D. elongatum Schwaegr.

D. fuscescens Turn.

D. majus Turn.

D. muehlenbeckii B.S.G.

D. scoparium Hedw.

Oncophorus

O. virens (Hedw.) Brid.

O. wahlenbergii Brid.

Oreas

O. martiana (Hoppe & Hornsch.)  
Brid.

Ditrichaceae

Ceratodon

C. heterophyllus

Kindb. ex J. M. Mac.

C. purpureus (Hedw.) Brid.

Distichium

D. capillaceum (Hedw.) B.S.G.

Distichium (Cont'd)

D. flexicaule (Schleich.) Hampe

D. flexicaule var.

sterilis De Not.

D. hagenii Ryan ex Philib.

D. inclinatum (Hedw.) B.S.G.

Saelania

S. glaucescens (Hedw.) Broth.

Trichodon

T. cylindricus

(Hedw.) Schimp. [11]

Encalyptaceae

Bryobrittonia

B. pellucida Williams [12]

Encalypta

E. alpina Smith

E. brevicolla (B.S.G.) Ångstr.

E. procera Bruch

E. rhabdocarpa Schwaegr. [13]

Fissidentaceae

Fissidens [14]

F. osmundioides Hedw.

Funariaceae

Funaria

F. arctica (Berggr.)

Kindb., In Persson, 1962 [15]

Funaria (Cont'd)

F. microstoma var. obtusifolia

Grout, In Steere, 1954a [15]

F. polaris Bryhn

Grimmiaceae

Grimmia

G. ovalis (Hedw.) Lindb.

G. plagiopodia Hedw.

G. platyphylla Mitt.,

In Steere, 1954a [16]

Racomitrium

R. canescens (Hedw.) Brid.

R. lanuginosum (Hedw.) Brid.

Schistidium

S. apocarpum (Hedw.) B.S.G. [17]

S. platyphyllum (Mitt.)

Perss., In Persson, 1962 [16]

S. strictum (Turn.)

Loeske ex O. Mårt. [18]

Meesiaceae

Meesia

M. triquetra (L.) Ångstr. [19]

M. uliginosa Hedw.

Mniaceae

Cinclidium

C. arcticum Schimp.

Cinclidium (Cont'd)

C. latifolium Lindb.

C. subrotundum Lindb.

Cyrtomnium

C. hymenophylloides

(Hueb.) Koponen

C. hymenophyllum (B.S.G.)

Holmen

Mnium

M. andrewsianum Steere [20]

M. medium B.S.G. [21]

M. orthorrhynchum Brid.

M. rugicum Laur. [22]

M. serratum Brid. [23]

M. spinulosum B.S.G.

Orthotrichaceae

Orthotrichum

O. cupulatum Brid.

Polytrichaceae

Oligotrichum

O. falcatum Steere [24]

Philocrya

P. aspera I. Hag. & C. Jens.

ex C. Jens.

Pogonatum

P. alpinum (Hedw.)

Roehl., In Persson, 1962

P. alpinum var. septentrionale

(Roehl.) Brid., In Steere,

1954a

P. capillare (Michx.) Brid.

Polytrichum

P. affine Funck [25]

P. alpestre Hoppe & Hornsch.

[26]

P. hyperboreum R. Br. [27]

P. jensenii I. Hag. [28]

P. norvegicum Hedw.

P. piliferum Hedw.

Psilopilum

P. cavifolium (Wils.) I. Hag.

Pottiaceae

Barbula

B. convoluta Hedw.

B. icmadophila Schimp.

B. johansenii Williams

Bryoerythrophyllum

B. recurvirostrum (Hedw.)

Chen, In Persson, 1962 [29]

Desmatodon

D. leucostomus (R. Br.) Berggr.

D. obtusifolius (Schwaegr.)

Schimp.

D. systylius Schimp.

Didymodon

D. recurvirostris (Hedw.)

Jenn., In Steere, 1954a [29]

Molendoa

M. sendtneriana (B.S.G.)

Limpr., In Steere, 1965 [30]

Pottia

P. obtusa (R. Br.)

C. M., In Persson, 1962

P. obtusifolia (R. Br.)

C. Muell., In Steere, 1954a

Pterygoneurum

P. arcticum Steere

Stegonia

S. latifolia var. pilifera

(Brid.) Broth. [31]

Tortella

T. tortuosa (Hedw.) Limpr.

Tortula

T. mucronifolia Schwaegr.

T. ruralis (Hedw.)

Gaertn., Meyer & Scherb.

Seligeriaceae

Blindia

B. polaris I. Hag. [32]

Seligeria

S. campylopoda Kindb.

S. diversifolia Lindb.

S. pusilla (Hedw.) B.S.G.

Splachnaceae

Haplodon

H. wormskjoldii (Hornem.) R. Br.

Splachnum

S. ovatum Hedw. [33]

S. vasculosum Hedw.

Tetraplodon

T. mnioides (Hedw.) B.S.G.

Voitia

V. hyperborea Grev. & Arnott

Tetraphidaceae

Tetraphis

T. pellucida Hedw.

Tetradontium

T. brownianum (Dicks.) Schwaegr.

Timmiaceae

Timnia

T. austriaca Hedw.

III. PLEUROCARPOUS MOSSES

Amblystegiaceae

Calliergon

C. cordifolium (Hedw.) Kindb.

C. giganteum (Schimp.) Kindb.

C. megalophyllum Mikut.

C. richardsonii (Mitt.) Kindb.

C. sarmentosum (Wahlenb.) Kindb.

C. stramineum (Brid.) Kindb.

C. turgescens (T. Jens.) Kindb.

[34]

Campylium

C. adscendens (Lindb.) Perss.

[35]

C. stellatum (Hedw.) C. Jens.

Cratoneuron

C. filicinum (Hedw.) Spruce

Drepanocladus

D. aduncus (Hedw.) Warnst.

D. badius (C. J. Hartm.) Roth

Drepanocladus (Cont'd)

D. brevifolius (Lindb.) Warnst.

D. intermedius (Lindb.)

Monkem. [36]

D. purpurascens (Schimp.)

Loeske [37]

D. revolvens (Sw.) Warnst.

D. trichophyllum

(Warnst.) Podp.

D. tundrae (H. Arnell)

Loeske [38]

D. uncinatus (Hedw.) Warnst.

D. vernicosus (Lindb.) Warnst.

Hygrohypnum

H. polare (Lindb.) Loeske

Scorpidium

S. scorpioides (Hedw.) Limpr.

Brachytheciaceae

Brachythecium

B. nelsonii Grout

B. salebrosum (Web. & Mohr)

B.S.G.

B. turgidum (C. J. Hartm.)

Kindb.

Cirriphyllum

C. cirrosum (Schwaegr.) Grout

Eurhynchium

E. pulchellum (Hedw.) Jenn.

Tomenthypnum

T. nitens (Hedw.) Loeske [39]

Climaciaceae

Climacium

C. dendroides (Hedw.)

Web. & Mohr

Entodontaceae

Entodon

E. orthocarpus Lindb. [40]

Orthothecium

O. chryseum (Schwaegr.) B.S.G.

O. strictum Lor.

Pleurozium

P. schreberi (Brid.) Mitt.

Hylocomiaceae

Hylocomium

H. alaskanum

(Lesq. & James) Lindb. [41]

Hypnaceae

Amblystegiella

A. alpicola (Lindb.)

Broth., In Persson, 1962 [42]

Hypnum

H. bambergeri Schimp.

H. cupressiforme Hedw.

H. pratense Koch

H. revolutum (Mitt.) Lindb.

H. subplicatile (Lindb.)

Limpr. [43]

H. vaucheri Lesq.

Isopterygium

I. pulchellum (Hedw.) Broth.,

In Persson, 1962 [42]

Neckeraceae

Neckera

N. oligocarpa Bruch

Plagiotheciaceae

Plagiothecium

P. denticulatum (Hedw.) B.S.G.

Rhytidiaceae

Gollania

G. densepinnata Dix.

Rhytidium

R. rugosum (Hedw.) Kindb.

Theliaceae

Myurella

M. apiculata (Hueb.)

Bruch, In Persson, 1962

M. julacea (Schwaegr.) B.S.G.

M. sibirica (C. Muell.) Reim.

Thuidiaceae

Abietinella

A. abietina (Hedw.) Fleish.

[44]

Thuidium

T. philibertii Limpr. [45]



ANNOTATIONS (Musci)

1. Sphagnum warnstorffianum = S. warnstorffii Russow, Ref. Nyholm, 1954-69.
2. Conostomum boreale = C. tetragonum (Hedw.) Lindb., Ref. Lawton, 1971.
3. Philonotis tomentella = P. fontana var. pumila (Turn.) Brid., Ref. Lawton, 1971.
4. Bryum inclinatum = B. stenotrichum var. stenotrichum, Ref. Lawton, 1971.
5. Bryum obtusifolium = B. cryophilum Mart., Ref. Crum, Steere, and Anderson, 1965a. Bryum obtusifolium = Pohlia obtusifolia (Brid.) L. Koch, Ref. Lawton, 1971.
6. Bryum ovatum = B. pseudotriquetrum (Hedw.) Gaertn., Meyer & Scherb., Ref. Crum, Steere, and Anderson, 1965a.
7. Pohlia albicans = P. wahlenbergii (Web. & Mohr) Andr., Ref. Lawton, 1971.
8. Anisothecium crispum and A. schreberianum = Dicranella schreberi (Hedw.) Schimp., Ref. Nyholm, 1954-69.
9. Cnestrum schisti = Cynodontium schisti (Web. & Mohr) Lindb., Ref. Lawton, 1971.
10. Lawton (1971) questions the occurrence of Dicranum bonjeanii in western North America, and suggests that specimens so named belong to D. howelii Ren. & Card. or D. scoparium Hedw. Brassard (1971b) considers a specimen named D. bonjeanii as a reduced form of D. scoparium.

11. Trichodon cylindricus = Ditrichum cylindricum (Hedw.) Grout, Ref. Lawton, 1971.
12. Bryobrittonia pellucida was placed first in the Encalyptaceae by Steere (1953a). Crum, Steere, and Anderson (1965a) and Worley and Iwatsuki (1970) placed the taxon in the Pottiaceae, whereas Brassard (1971b) retained it in the Encalyptaceae.
13. Encalyptra rhabdocarpa = E. vulgaris var. rhabdocarpa (Schwaegr.) Lawton, Ref. Lawton, 1971.
14. Brassard's (1971a) distribution map of Fissidens arcticus Bryhn indicates the occurrence of the taxon in the geographical area pertaining to this report; however, I was unable to find supporting documentation in the literature. Sherrard (1955) reported F. arcticus from the southern slopes of the Brooks Range.
15. Funaria arctica = F. microstoma var. obtusifolia Grout, Ref. Crum, Steere, and Anderson, 1965a.
16. Grimmia platyphylla and Schistidium platyphyllum = G. alpicola var. latifolia (Zett.) Moell., Ref. Crum, Steere, and Anderson, 1965a; Lawton, 1971.
17. Schistidium apocarpum = Grimmia apocarpa var. apocarpa, Ref. Lawton, 1971.
18. Schistidium strictum = Grimmia apocarpa var. stricta (Turn.) Hook. & Tayl., Ref. Persson, 1962; Lawton, 1971.
19. Meesia triquetra = M. trifaria Crum, Steere & Anderson, Ref. Crum, Steere, and Anderson, 1965a; however, Lawton (1971) retains the name Meesia triquetra and lists M. trifaria as a synonym.

20. Mnium andrewsianum = Rhizomnium andrewsianum (Steere) Koponen, Ref. Koponen, 1968.
21. Mnium medium = Plagiomnium medium (B.S.G.) Koponen, Ref. Koponen, 1968.
22. Mnium rugicum = Plagiomnium rugicum (Laur.) Koponen, Ref. Koponen, 1968.
23. Mnium serratum = M. marginatum (With.) P. Beauv., Ref. Lawton, 1971.
24. Oligotrichum falcatum = Psilopilum falcatum (Steere) Crum, Steere & Anderson, Ref. Crum, Steere, and Anderson, 1965a,b.
25. Schofield (1968b) states - "Polytrichum affine Funck is a 'weak' species, usually treated as P. juniperinum var. gracilius Wahlenb."
26. Polytrichum alpestre = P. juniperinum var. gracilius Wahlenb., Ref. Crum, Steere, and Anderson, 1965a.
27. It appears that Polytrichum hyperboreum = P. piliferum var. hyperboreum (R. Br.) C. Muell. listed in Worley and Iwatsuki (1970); however, Brassard (1971b) regards P. hyperboreum as a distinct species from P. piliferum.
28. Polytrichum jensenii = P. commune var. jensenii (Hag.) Moenk., Ref. Lawton, 1971.
29. Didymodon recurvirostris = Bryoerythrophyllum recurvirostrum (Hedw.) Chen, Ref. Crum, Steere, and Anderson, 1965a.
30. Molendoa sendtnerianum = Anoetangium sendtnerianum B.S.G., Ref. Crum, Steere, and Anderson, 1965a.
31. Stegonia latifolia var. pilifera = Pottia latifolia var. pilifera (Brid.) C. Muell., Ref. Lawton, 1971.

32. Blinda polaris = Seligeria polaris Berggr., Ref. Crum, Steere, and Anderson, 1965a.
33. Splachnum ovatum = S. sphaericum Hedw., Ref. Lawton, 1971.
34. Calliergon turgescens = Scorpidium turgescens (T. Jens.) Loeske, Ref. Crum, Steere, and Anderson, 1965a.
35. Campylium adscendens = C. stellatum var. adscendens (Lindb.) Perss., Ref. Crum, Steere, and Anderson, 1965a.
36. Drepanocladus intermedius = D. revolvens var. intermedius (Lindb. ex C. J. Hartm.) Rich. & Wallace, Ref. Crum, Steere, and Anderson, 1965a.
37. Drepanocladus purpurascens = D. exannulatus var. purpurascens (Schimp.) Herz., Ref. Nyholm, 1954-69.
38. Drepanocladus tundrae = D. exannulatus var. tundrae (Arn.) Warnst., Ref. Lawton, 1971.
39. Tomenthypnum nitens = Homalothecium nitens (Hedw.) Robins., Ref. Lawton, 1971.
40. Entodon orthocarpus = E. concinnus (De Not.) Par., Ref. Crum, Steere, and Anderson, 1965a.
41. Hylocomium alaskanum = H. splendens var. alaskanum (Lesq. & James) Limpr., Ref. Crum, Steere, and Anderson, 1965a. Brassard (1971b) considers all Ellesmere Island specimens of H. splendens to belong to var. alaskanum.
42. Amblystegiella alpicola = Isopterygium pulchellum (Hedw.) Jaeg. & Sauerb. (?), Ref. Crum, Steere, and Anderson, 1965a.
43. Hypnum subplicatile = H. plicatulum (Lindb.) Jaeg. & Sauerb., Ref. Crum, Steere, and Anderson, 1965a.

44. Abietinella abietina = Thuidium abietinum (Hedw.) B.S.G., Ref.  
Lawton, 1971.
45. Thuidium philibertii = T. delicatulum var. radicans (Kindb.)  
Crum, Steere & Anderson, Ref. Crum, Steere, and Anderson,  
1965a,b.

ANAKTUVUK PASS (68°10'N; 151°39'W)

HEPATICAЕ

I. Leafy Liverworts

Barbilophozia [B]

B. barbata

Blepharostoma

B. trichophyllum

Calypogeia

C. sphagnicola

Cephalozia

C. pleniceps

Cephaloziella

C. subdentata

Mesoptychia

M. sahlbergii

Orthocaulis [B]

O. binstaedii

O. kunzeanus

Plagiochila

P. arctica

Ptilidium

P. ciliare

Scapania

S. gymnostomophila

Sphenolobus

S. minutus [D]

Tritomaria

T. quinquedentata

II. Thalloid Liverworts

Marchantia

M. alpestris

Preissia

P. quadrata

Riccardia

R. latifrons

MUSCI

I. Sphagnum Mosses

Sphagnum

S. fimbriatum

S. fuscum

S. lenense

S. rubellum

S. squarrosum

II. Acrocarpous Mosses

Aulacomnium

A. acuminatum

A. palustre

A. turgidum

Bryum

B. ovatum [6]

ANAKTUVUK PASS (Cont'd)

Catoscopium

C. nigratum

Cinclidium

C. latifolium

Cyrtomnium

C. hymenophylloides

C. hymenophyllum

Dicranum

D. angustum

D. elongatum

D. fuscescens

D. majus

D. muehlenbeckii

D. scoparium

Distichium

D. capillaceum

D. flexicaule

Encalypta

E. rhabdocarpa [13]

Fissidens [14]

F. osmundioides

Meesia

M. uliginosa

Mnium

M. andrewsianum [20]

Mnium (Cont'd)

M. rugicum [22]

M. spinulosum

Oncophorus

O. wahlenbergii

Pogonatum

P. alpinum

Pohlia

P. cruda

Polytrichum

P. affine [25]

Rhacomitrium

R. lanuginosum

Seligeria

S. pusilla

Tetraplodon

T. mnioides

Timmia

T. austriaca

Tortella

T. tortuosa

Tortula

T. ruralis

ANAKTUVUK PASS (Cont'd)

III. Pleurocarpous Mosses

Orthothecium

Abietinella

O. chryseum

A. abietina [44]

Rhytidium

Calliergon

R. rugosum

C. giganteum

Tomenthypnum

C. sarmentosum

T. nitens [39]

Campylium

C. adscendens [35]

C. stellatum

Drepanocladus

D. badius

D. brevifolius

D. intermedius [36]

D. revolvens

D. uncinatus

Entodon

E. orthocarpus [40]

Eurhynchium

E. pulchellum

Hylocomium

H. alaskanum [41]

Hypnum

H. bambergeri

Myurella

M. julacea



LAKE PETERS (69°19'N; 145°01'W)

HEPATICAEE

I. Leafy Liverworts

Cephaloziella

C. divaricata

Diplophyllum

D. taxifolium

Harpanthus

H. flotovianus

Lophozia [B]

L. latifolia

L. ventricosa

Orthocaulis [B]

O. quadrilobus

Ptilidium

P. ciliare

Radula

R. complanata

Scapania

S. praetervisa [F]

Temnoma

T. setiforme [E]

Tritomaria

T. quinquedentata

II. Thalloid Liverworts

Marchantia

M. polymorpha

MUSCI

I. Sphagnum Mosses

Sphagnum

S. girgensohnii

S. teres

II. Acrocarpous Mosses

Amphidium

A. lapponicum

A. mougeotii

Aulacomnium

A. acuminatum

A. palustre

A. turgidum

Bartramia

B. ithyphylla

Bryoerythrophyllum

B. recurvirostrum [29]

Bryum

B. cryophilum

B. inclinatum [4]

B. ovatum [6]

B. pseudotriquetrum

LAKE PETERS (Cont'd)

Ceratodon

C. purpureus

Cyrtomnium

C. hymenophylloides

Desmatodon

D. leucostomus

Dicranum

D. elongatum

D. fuscescens

Distichium

D. capillaceum

D. flexicaule

Funaria

F. polaris

Grimmia

G. ovalis

Mnium

M. andrewsianum [20]

M. medium [21]

M. orthorrhynchum

M. serratum [23]

Oligotrichum

O. falcatum [24]

Oreas

O. martiana

Philocrya

P. aspera

Pogonatum

P. alpinum

Pohlia

P. nutans

P. proliqera

Polytrichum

P. jensenii [28]

Pterygoneurum

P. arcticum

Rhacomitrium

R. canescens

R. lanuginosum

Schistidium

S. platyphyllum [16]

S. strictum [18]

Timmia

T. austriaca

Tortula

T. ruralis

III. Pleurocarpous Mosses

Abietinella

A. abietina [44]

LAKE PETERS (Cont'd)

Amblystegiella

A. alpicola [42]

Brachythecium

B. turgidum

Calliergon

C. cordifolium

C. sarmentosum

Campylium

C. adscendens [35]

C. stellatum

Cirriphyllum

C. cirrosum

Climacium

C. dendroides

Cratoneuron

C. filicinum

Drepanocladus

D. badius

D. brevifolius

D. intermedius [36]

D. uncinatus

Hygrohypnum

H. polare

Hylocomium

H. alaskanum [41]

Hypnum

H. cupressiforme

H. revolutum

Isopterygium

I. pulchellum [42]

Myurella

M. apiculata

M. julacea

Neckera

N. oligocarpa

Orthothecium

O. chryseum

Rhytidium

R. rugosum

Thuidium

T. philibertii [45]

Tomenthypnum

T. nitens [39]

UMIAT (69°24'N; 152°09'W)

HEPATICA

I. Leafy Liverworts

Barbilophozia [B]

B. barbata

Blepharostoma

B. trichophyllum

Calypogeia

C. sphagnicola

Cephalozia

C. media

C. pleniceps

Cephaloziella

C. divaricata

C. subdentata

Leiocolea [B]

L. schultzei [C]

Lophozia [B]

L. groenlandica

Mesoptychia

M. sahlbergii

Mylia

M. anomala

Orthocaulis [B]

O. binstaedii

O. kunzeanus

Orthocaulis (Cont'd)

O. quadrilobus

Plagiochila

P. arctica

Scapania

S. paludicola

Sphenolobus

S. minutus [D]

II. Thalloid Liverworts

Marchantia

M. polymorpha

Riccardia

R. latifrons

MUSCI

I. Sphagnum Mosses

Sphagnum

S. aongstroemii

S. balticum

S. fimbriatum

S. fuscum

S. imbricatum

S. lenense

S. squarrosum

S. subsecundum

S. teres

UMIAT (Cont'd)

Sphagnum (Cont'd)

S. warnstorffianum [1]

II. Acrocarpous Mosses

Amphidium

A. lapponicum

Anisothecium

A. schreberianum [8]

Aulacomnium

A. palustre

A. turgidum

Barbula

B. convoluta

Bryoerythrophyllum

B. recurvirostrum [29]

Bryum

B. inclinatum [4]

B. ovatum [6]

B. pseudotriquetrum

Catoscopium

C. nigrum

Cinclidium

C. arcticum

C. latifolium

C. subrotundum

Cnestrum

C. schistii [9]

Desmatodon

D. obtusifolius

D. systylius

Dicranella

D. cerviculata

Dicranum

D. angustum

D. bonjeanii [10]

D. elongatum

D. fuscens

D. majus

Distichium

D. capillaceum

D. flexicaule

D. flexicaule var. sterilis

Encalypta

E. brevicolla

E. procera

E. rhabdocarpa [13]

Funaria

F. arctica [15]

Grimmia

G. plagiopodia

UMIAT (Cont'd)

Meesia

M. triquetra [19]

Mnium

M. andrewsianum [20]

Molendoa

M. sendtneriana [30]

Philonotis

P. tomentella [3]

Pohlia

P. proliqera

Polytrichum

P. affine [25]

P. hyperboreum [27]

Pterygoneurum

P. arcticum

Racomitrium

R. lanuginosum

Schistidium

S. apocarpum [17]

Seligeria

S. diversifolia

S. pusilla

Splachnum

S. ovatum [33]

Stegonia

S. latifolia var. pilifera [31]

Tetraphis

T. pellucida

Tetrodontium

T. brownianum

Tortula

T. ruralis

III. Pleurocarpous Mosses

Brachythecium

B. turgidum

Calliergon

C. cordifolium

C. megalophyllum

Campylium

C. adscendens [35]

Cirriphyllum

C. cirrosum

Climacium

C. dendroides

Drepanocladus

D. badius

D. trichophyllum

D. tundrae [38]

D. vernicosus

UMIAT (Cont'd)

Eurhynchium

E. pulchellum

Hylocomium

H. alaskanum [41]

Hypnum

H. cupressiforme

H. pratense

H. subplicatile [43]

H. vaucheri

Isopterygium

I. pulchellum [42]

Myurella

M. apiculata

M. julacea

M. sibirica

Pleurozium

P. schreberi

Scorpidium

S. scorpioides

Thuidium

T. philibertii [45]

Tomenthypnum

T. nitens [39]

MEADE RIVER (70°31'N; 157°23'W)

HEPATICAEE

I. Leafy Liverworts

Lophozia [B]

L. latifolia

L. pellucida

L. ventricosa

Plagiochila

P. arctica

Ptilidium

P. ciliare

Sphenolobus

S. minutus [D]

Tritomaria

T. quinquedentata

II. Thalloid Liverworts

Clevea

C. hyalina [G]

Preissia

P. quadrata

MUSCI

I. Sphagnum Mosses

Sphagnum

S. girgensohnii

S. imbricatum

S. rubellum

II. Acrocarpous Mosses

Anisothecium

A. crispum [8]

Aulacomnium

A. turgidum

Barbula

B. icmadophila

Bartramia

B. ithyphylla

B. pomiformis

Bryobrittonia

B. pellucida [12]

Bryoerythrophyllum

B. recurvirostrum [29]

Bryum

B. arcticum

B. argenteum

B. ovatum [6]

B. pseudotriquetrum

B. uliginosum

Ceratodon

C. purpureus

Cinclidium

C. latifolium

C. subrotundum



MEADE RIVER (Cont'd)

Cyrtomnium

C. hymenophyllum

Desmatodon

D. leucostomus

Dicranum

D. elongatum

D. fuscescens

D. majus

Didymodon

D. recurvirostris [29]

Distichium

D. capillaceum

D. flexicaule

D. flexicaule var. sterilis

Funaria

F. arctica [15]

F. microstoma var. obtusifolia

[15]

F. polaris

Meesia

M. triquetra [19]

Mnium

M. andrewsianum [20]

M. rugicum [23]

M. spinulosum

Pogonatum

P. alpinum

Pohlia

P. albicans [7]

P. cruda

P. proligera

P. sphagnicola

Polytrichum

P. alpestre [26]

P. jensenii [28]

P. piliferum

Pottia

P. obtusa

Rhacomitrium

R. canescens

Saelania

S. glaucescens

Tetraplodon

T. mnioides

Timmia

T. austriaca

Tortula

T. mucronifolia

MEADE RIVER (Cont'd)

III. Pleurocarpous Mosses

Abietinella

A. abietina [44]

Brachythecium

B. nelsonii

B. salebrosum

B. turgidum

Calliergon

C. richardsonii

C. stramineum

Campylium

C. adscendens [35]

C. stellatum

Cirriphyllum

C. cirrosum

Cratoneuron

C. filicinum

Drepanocladus

D. aduncus

D. intermedius [36]

D. revolvens

D. uncinatus

Eurhynchium

E. pulchellum

Hylocomium

H. alaskanum [41]

Isopterygium

I. pulchellum [42]

Myurella

M. apiculata

Orthothecium

O. chryseum

Pleurozium

P. schreberi

Rhytidium

R. rugosum

POINT BARROW (71°21'N; 156°37'W)

HEPATICA

I. Leafy Liverworts

Cephaloziella

C. arctica

Chiloscyphus

C. pallescens

Lophozia [B]

L. ventricosa

Orthocaulis [B]

O. quadrilobus

Plagiochila

P. arctica

Scapania

S. irrigua

S. mucronata

S. paludicola

Tritomaria

T. quinquedentata

II. Thalloid Liverworts

Marchantia

M. polymorpha

MUSCI

I. Sphagnum Mosses

Sphagnum

S. girgensohnii

Sphagnum (Cont'd)

S. squarrosum

II. Acrocarpous Mosses

Anisothecium

A. crispum [8]

Aulacomnium

A. palustre

A. turgidum

Bartramia

B. ithyphylla

Bryoerythrophyllum

B. recurvirostrum [29]

Bryum

B. arcticum

B. argenteum

B. calophyllum

B. inclinatum [4]

B. nitidulum

B. pallens

B. salinum

Ceratodon

C. heterophyllum

C. purpureus

Cinclidium

C. arcticum

POINT BARROW (Cont'd)

Conostomum

C. boreale [2]

Cynodontium

C. alpestre

Dicranella

D. cerviculata

D. crispa

Dicranum

D. angustum

D. elongatum

D. majus

Distichium

D. capillaceum

D. flexicaule

D. hagenii

D. inclinatum

Encalypta

E. alpina

E. procera

E. rhabdocarpa [13]

Haplodon

H. wormskjoldii

Leptobryum

L. pyriforme

Mnium

M. andrewsianum [20]

M. rugicum [22]

Oncophorus

O. virens

Pogonatum

P. alpinum var. septentrionale

P. capillare

Pohlia

P. cruda

P. nutans

Pottia

P. obtusa

P. obtusifolia

Psilopilum

P. cavifolium

Splachnum

S. vasculosum

Tetraplodon

T. mnioides

Tortula

T. mucronifolia

T. ruralis

Trichodon

T. cylindricus [11]

POINT BARROW (Cont'd)

III. Pleurocarpous Mosses

Brachythecium

B. nelsonii

B. turgidum

Calliergon

C. giganteum

C. sarmentosum

C. turgescens [34]

Campylium

C. stellatum

Cirriphyllum

C. cirrosum

Drepanocladus

D. aduncus

D. purpurascens [37]

D. revolvens

Isopterygium

I. pulchellum [42]

Myurella

M. julacea

Orthothecium

O. chryseum

Plagiothecium

P. denticulatum

REFERENCES

Arnell, S. 1956.

Illustrated moss flora of Fennoscandia. I. Hepaticae. Lund. 315 p.

Brassard, G. R. 1971a.

The mosses of northern Ellesmere Island, arctic Canada. I. Ecology and phytogeography, with an analysis for the Queen Elizabeth Islands.

The Bryologist 74: 233-281.

Brassard, G. R. 1971b.

The mosses of northern Ellesmere Island, arctic Canada. II. Annotated list of the taxa. The Bryologist 74: 282-311.

Crum, H. 1965.

Barbula johansenii, an arctic disjunct in the Canadian Rocky Mountains.

The Bryologist 68: 344-345.

Crum, H., W. C. Steere, and L. E. Anderson. 1965a.

A list of the mosses of North America. The Bryologist 68: 377-432.

Crum, H., W. C. Steere, and L. E. Anderson. 1965b.

Some additional new names for North American mosses. The Bryologist 68: 432-434.

Harvill, Jr., A. M. 1950.

Notes on the mosses of Alaska. III. Some new or otherwise interesting records. The Bryologist 53: 16-26.

Johnson, A. W., L. A. Viereck, R. E. Johnson, and H. Melchior. 1966.

Vegetation and flora. p. 277-354. In N. J. Wilimovsky and J. N. Wolfe (eds.). Environment of the Cape Thompson Region, Alaska.

United States Atomic Energy Commission.

Koponen, T. 1968.

Generic revision of Mniaceae Mitt. (Bryophyta). *Annales Botanici Fennici* 5: 117-151.

Lawton, Elva. 1971.

Moss flora of the Pacific Northwest. The Hattori Botanical Laboratory, Nichinan, Miyazaki. 362 p. + 195 plates.

Nyholm, Elsa. 1954-69.

Illustrated moss flora of Fennoscandia. II. Musci. Lund. 799 p.

Persson, H. 1946.

Some Alaskan-Yukon bryophytes. *The Bryologist* 49: 41-58.

Persson, H. 1949.

Studies in the bryophyte flora of Alaska-Yukon. *Svensk Botanisk Tidskrift* 43: 491-533.

Persson, H. 1952a.

Critical or otherwise interesting bryophytes from Alaska-Yukon. *The Bryologist* 55: 1-25 and 88-116.

Persson, H. 1952b.

Additional list of Alaskan-Yukon mosses. *The Bryologist* 55: 261-279.

Persson, H. 1962.

Bryophytes from Alaska collected by E. Hultén and others. *Svensk Botanisk Tidskrift* 56: 1-35.

Persson, H. 1963.

Bryophytes of Alaska and Yukon Territory collected by Hansford T. Shacklette. *The Bryologist* 66: 1-26.

Schofield, W. B. 1968a.

A checklist of Hepaticae and Anthocerotae of British Columbia.

Syesis 1: 157-162.

Schofield, W. B. 1968b.

A selectively annotated checklist of British Columbia mosses.

Syesis 1: 163-175.

Schuster, R. M. 1966.

The Hepaticae and Anthocerotae of North America, east of the hundredth meridian. Volume I. Columbia University Press, New York. 802 p.

Schuster, R. M. 1969.

The Hepaticae and Anthocerotae of North America, east of the hundredth meridian. Volume II. Columbia University Press, New York. 1062 p.

Schuster, R. M., and W. C. Steere. 1958.

Hygrolejeunea alaskana sp. n., A critical endemic of northern Alaska.

Bulletin of the Torrey Botanical Club. 85: 188-196.

Shacklette, H. T. 1965.

Bryophytes associated with mineral deposits and solutions in Alaska.

United States Geological Survey Bulletin 1198-C. 18 p.

Sherrard, Elizabeth M. 1955.

Bryophytes of Alaska. I. Some mosses from the southern slopes of the Brooks Range. The Bryologist 58: 225-236.

Steere, W. C. 1952.

Bryophyta of arctic America. V. The rediscovery of Barbula

johansenii. The Bryologist 55: 259-560.



Steere, W. C. 1953a.

The systematic position of Bryobrittonia. American Journal of Botany 40: 354-358.

Steere, W. C. 1953b.

On the geographical distribution of arctic bryophytes. Stanford University Publications, Biological Sciences 11: 30-47.

Steere, W. C. 1954a.

Chromosome number and behavior in arctic mosses. Botanical Gazette 116: 93-133.

Steere, W. C. 1954b.

The cryptogamic flora of the Arctic. V. Bryophytes. The Botanical Review 20: 425-450.

Steere, W. C. 1956.

The taxonomic status and geographic distribution of Philocrya aspera. The Bryologist 59: 161-167.

Steere, W. C. 1958a.

Oligotrichum falcatum, a new species from arctic Alaska. The Bryologist 61: 115-118.

Steere, W. C. 1958b.

The discovery of Oreas martiana in arctic Alaska; a genus new to North America. The Bryologist 61: 119-124.

Steere, W. C. 1958c.

Mnium andrewsiana, a new subarctic and arctic moss. The Bryologist 61: 173-182.

Steere, W. C. 1959.

Pterygoneurum arcticum, a new species from northern Alaska. The  
Bryologist 62: 215-221.

Steere, W. C. 1963.

The geographic distribution of Funaria polaris. The Bryologist  
66: 213-217.

Steere, W. C. 1965.

The boreal bryophyte flora as affected by Quaternary glaciation.  
p. 485-495. In H. E. Wright, Jr., and D. G. Frey (eds.). The  
Quaternary of the United States, a review volume for the VII Congress  
of the International Association for Quaternary Research. Princeton  
University Press, Princeton.

Steere, W. C., and R. M. Schuster. 1960.

The hepatic genus Ascidiota Massalango new to North America. Bulletin  
of the Torrey Botanical Club 87: 209-215.

Wiggins, Ira L., and J. H. Thomas. 1962.

A flora of the Alaskan Arctic Slope. Arctic Institute of North  
America Special Publication No. 4. University of Toronto Press,  
Toronto. 425 p.

Worley, I. A. 1970.

A checklist of the Hepaticae of Alaska. The Bryologist 73: 32-38.

Worley, I. A., and Z. Iwatsuki. 1970.

A checklist of the mosses of Alaska. The Bryologist 73: 59-71.

Worley, I. A., and Z. Iwatsuki. 1971.

Additions to the checklist of Alaskan mosses. The Bryologist  
74: 376.

ADDITIONAL REFERENCES

Smith, G. L. 1971.

Conspectus of the genera of Polytrichaceae. Memoirs of the New York Botanical Garden 21: 1-83.

\_\_\_ This synopsis treats the genera of the Polytrichaceae, and their major subdivisions. Nomenclatural changes in references to new taxa and new combinations are proposed.

Steere, W. C. 1971.

A review of arctic bryology. The Bryologist 74: 428-441.

\_\_\_ This review concerns the principal bryological literature of the arctic regions of the world. A thorough coverage is given for arctic Alaska and the Yukon.

# APPENDIX

## ALPHABETIC LIST OF BRYOPHYTES OF THE HIGH ALASKAN ARCTIC

### KEY TO LOCALITIES

- 01 = ANAKTUVUK PASS (68-10-N;151-39-W)
- 02 = LAKE PETERS (69-19-N;145-01-W)
- 03 = UMIAT (69-24-N;152-09-W)
- 04 = MEADE RIVER (PO) (70-31-N;157-23-W)
- 05 = POINT BARROW (71-21-N;156-37-W)
- 11 = OTHER LOCALITIES
- 12 = LOCALITY NOT GIVEN

### KEY TO MORPHOLOGICAL TYPES

- 1 = LEAFY LIVERWORTS
- 2 = THALLOID LIVERWORTS
- 3 = SPHAGNUM MOSSES
- 4 = ACROCARPOUS MOSSES
- 5 = PLEUROCARPOUS MOSSES

\*\*\* N = CHROMOSOME NUMBER

***** TAXON *****		**** REFERENCE ****
01 5	ABIETINELLA ABIETINA (L. EX HEDW.) C. M.	PERSSON 1962:17
02 5	ABIETINELLA ABIETINA (L. EX HEDW.) C. M.	PERSSON 1962:17
04 5	ABIETINELLA ABIETINA (L. EX HEDW.) C. M.	PERSSON 1962:17
02 5	AMBLYSTEGIELLA ALPICOLA (LINDB.) BROTH.	PERSSON 1962:17
02 4	AMPHIDIUM LAPPONICUM (HEDW.) SCHP.	PERSSON 1962:17
03 4	AMPHIDIUM LAPPONICUM (HEDW.) SCHP.	PERSSON 1962:17
02 4	AMPHIDIUM MOUGEOTII (BR. & SCH.) SCHP.	PERSSON 1962:18
04 4	ANISOTHECIUM CRISPUM (HEDW.) LINDB.	PERSSON 1962:18
05 4	ANISOTHECIUM CRISPUM (HEDW.) LINDB.	PERSSON 1962:18
03 4	ANISOTHECIUM SCHREBERIANUM (HEDW.) DIX.	PERSSON 1962:18
12 1	ASCIDIOTA BLEPHAROPHYLLA MASSAL.	STEERE 1965:491
11 1	ASCIDIOTA BLEPHAROPHYLLA SSP ALASKANA STEERE & -	STEERE & - 1960:209
02 4	AULACOMNIUM ACUMINATUM (LINDB. & ARN.) PAR.	PERSSON 1962:18
11 4	AULACOMNIUM ACUMINATUM (LINDB. & ARN.) PAR.	PERSSON 1946:51
01 4	AULACOMNIUM ACUMINATUM (LINDB. & ARN.) PAR.	PERSSON 1962:18
12 4	AULACOMNIUM ACUMINATUM (LINDB. & ARN.) PARIS	STEERE 1953B:32
01 4	AULACOMNIUM PALUSTRE (HEDW.) SCHWAEGR.	PERSSON 1962:18
02 4	AULACOMNIUM PALUSTRE (HEDW.) SCHWAEGR.	PERSSON 1962:18
03 4	AULACOMNIUM PALUSTRE (HEDW.) SCHWAEGR.	PERSSON 1962:18
05 4	AULACOMNIUM PALUSTRE (HEDW.) SCHWAEGR.	PERSSON 1962:18
01 4	AULACOMNIUM TURGIDUM (WG.) SCHWAEGR.	PERSSON 1962:18
02 4	AULACOMNIUM TURGIDUM (WG.) SCHWAEGR.	PERSSON 1962:18
03 4	AULACOMNIUM TURGIDUM (WG.) SCHWAEGR.	PERSSON 1962:18
04 4	AULACOMNIUM TURGIDUM (WAHLENB.) SCHWAEGR. N=12	STEERE 1954A:98
05 4	AULACOMNIUM TURGIDUM (WG.) SCHWAEGR.	PERSSON 1962:18

01 1 BARBILOPHOZIA BARBATA (SCHMID.) DUM.	PERSSON 1962:7
03 1 BARBILOPHOZIA BARBATA (SCHMID.) LOESKE	PERSSON 1952A:4
03 1 BARBILOPHOZIA BARBATA (SCHMID.) DUM.	PERSSON 1962:7
03 4 BARBULA CONVOLUTA HEDW.	PERSSON 1962:18
03 4 BARBULA CONVOLUTA HEDW.	STEERE 1965:489
04 4 BARBULA ICMADOPHILA BR. & SCH.	PERSSON 1962:18
11 4 BARBULA JOHANSENII WILLIAMS	STEERE 1952:259
11 4 BARBULA JOHANSENII WILLIAMS	STEERE 1953B:34
11 4 BARBULA JOHANSENII WILLIAMS	CRUM 1965:344
02 4 BARTRAMIA ITHYPHYLLA BRID.	PERSSON 1962:18
04 4 BARTRAMIA ITHYPHYLLA BRID.	PERSSON 1962:18
05 4 BARTRAMIA ITHYPHYLLA BRID. N=12	STEERE 1954A:98
05 4 BARTRAMIA ITHYPHYLLA BRID.	PERSSON 1962:18
04 4 BARTRAMIA POMIFORMIS HEDW. N=8	STEERE 1954A:98
01 1 BLEPHAROSTOMA TRICHOPHYLLUM (L.) DUM.	PERSSON 1962:7
03 1 BLEPHAROSTOMA TRICHOPHYLLUM (L.) DUM.	PERSSON 1962:7
12 4 BLINDIA POLARIS (BERGGREN) HAGEN	STEERE 1953B:33
04 5 BRACHYTHECIUM NELSONII GROUT	PERSSON 1962:18
05 5 BRACHYTHECIUM NELSONII GROUT	PERSSON 1962:18
04 5 BRACHYTHECIUM SALEBROSUM (W. & M.) BR. & SCH.	PERSSON 1962:18
02 5 BRACHYTHECIUM TURGIDUM HN.	PERSSON 1962:18
03 5 BRACHYTHECIUM TURGIDUM (HN.) KINDB.	PERSSON 1952B:262
04 5 BRACHYTHECIUM TURGIDUM HN.	PERSSON 1962:18
05 5 BRACHYTHECIUM TURGIDUM HN.	PERSSON 1962:18
05 5 BRACHYTHECIUM TURGIDUM (HARTM.) KINDB.	PERSSON 1963:10
11 5 BRACHYTHECIUM TURGIDUM (HN.) KINDB.	PERSSON 1952B:262
04 4 BRYOBRIITONIA PELLUCIDA WILLIAMS	STEERE 1953A:354
02 4 BRYOERYTHROPHYLLUM RECURVIROSTRUM (HEDW.) CHEN	PERSSON 1962:19
03 4 BRYOERYTHROPHYLLUM RECURVIROSTRUM (HEDW.) CHEN	PERSSON 1962:19
04 4 BRYOERYTHROPHYLLUM RECURVIROSTRUM (HEDW.) CHEN	PERSSON 1962:19
05 4 BRYOERYTHROPHYLLUM RECURVIROSTRUM (HEDW.) CHEN	PERSSON 1962:19
04 4 BRYUM ARCTICUM (R. BR.) BR. & SCH.	PERSSON 1962:19
05 4 BRYUM ARCTICUM (R. BR.) BR. & SCH. N=20	STEERE 1954A:97
05 4 BRYUM ARCTICUM (R. BR.) BR. & SCH.	PERSSON 1962:19
05 4 BRYUM ARCTICUM (R. BR.) BR. & SCH.	PERSSON 1963:10
04 4 BRYUM ARGENTEUM HEDW.	PERSSON 1962:19
05 4 BRYUM ARGENTEUM HEDW.	PERSSON 1962:19
05 4 BRYUM CALOPHYLLUM R. BR. N=40	STEERE 1954A:97
05 4 BRYUM CALOPHYLLUM R. BR.	PERSSON 1962:19
02 4 BRYUM CRYOPHILUM O. MART.	PERSSON 1962:19
02 4 BRYUM INCLINATUM (BRID.) BR. & SCH.	PERSSON 1962:19
03 4 BRYUM INCLINATUM (BRID.) BR. & SCH.	PERSSON 1962:19
05 4 BRYUM INCLINATUM (WEB. & MOHR.) STURM N=30	STEERE 1954A:97
05 4 BRYUM NITIDULUM LINDB. N=20	STEERE 1954A:97

11 4 BRYUM OBTUSIFOLIUM LINDB.	PERSSON 1952A:98
01 4 BRYUM OVATUM JUR.	PERSSON 1962:19
02 4 BRYUM OVATUM JUR.	PERSSON 1962:19
03 4 BRYUM OVATUM JUR. LAUBM.	PERSSON 1952A:99
03 4 BRYUM OVATUM JUR.	PERSSON 1962:19
04 4 BRYUM OVATUM JUR.	PERSSON 1962:19
05 4 BRYUM PALLENS (BRID.) ROHL.	PERSSON 1962:19
02 4 BRYUM PSEUDOTRIQUETRUM (HEDW.) SCHWAEGR.	PERSSON 1962:19
03 4 BRYUM PSEUDOTRIQUETRUM (HEDW.) SCHWAEGR.	PERSSON 1962:19
04 4 BRYUM PSEUDOTRIQUETRUM (HEDW.) SCHWAEGR.	PERSSON 1962:19
05 4 BRYUM SALINUM HAG.	PERSSON 1962:19
04 4 BRYUM ULIGINOSUM (BRID.) BRUCH N=10	STEERE 1954A:97
02 5 CALLIERGON CORDIFOLIUM (HEDW.) KINDB.	PERSSON 1962:20
03 5 CALLIERGON CORDIFOLIUM (HEDW.) KINDB.	PERSSON 1962:20
01 5 CALLIERGON GIGANTEUM (SCHP.) KINDB.	PERSSON 1962:20
05 5 CALLIERGON GIGANTEUM (SCHP.) KINDB.	PERSSON 1962:20
03 5 CALLIERGON MEGALOPHYLLUM MIKUT.	PERSSON 1962:20
04 5 CALLIERGON RICHARDSONII (MITT.) KINDB.	PERSSON 1962:20
01 5 CALLIERGON SARMENTOSUM (WG.) KINDB.	PERSSON 1962:20
02 5 CALLIERGON SARMENTOSUM (WG.) KINDB.	PERSSON 1962:20
05 5 CALLIERGON SARMENTOSUM (WG.) KINDB.	PERSSON 1962:20
04 5 CALLIERGON STRAMINEUM (BRID.) KINDB.	PERSSON 1962:20
05 5 CALLIERGON TURGESCENTES (TH. JENS.) KINDB.	PERSSON 1962:20
01 1 CALYPOGEIA SPHAGNICOLA (ARN. & PERSS.) LOESKE	PERSSON 1962:7
03 1 CALYPOGEIA SPHAGNICOLA (ARN. & PERSS.) - & -	PERSSON 1952A:7
03 1 CALYPOGEIA SPHAGNICOLA (ARN. & PERSS.) LOESKE	PERSSON 1962:7
01 5 CAMPYLUM ADSCENDENS (LINDB.) H. PERSS.	PERSSON 1962:20
02 5 CAMPYLUM ADSCENDENS (LINDB.) H. PERSS.	PERSSON 1962:20
03 5 CAMPYLUM ADSCENDENS (LINDB.) H. PERSS.	PERSSON 1962:20
04 5 CAMPYLUM ADSCENDENS (LINDB.) H. PERSS.	PERSSON 1962:20
01 5 CAMPYLUM STELLATUM (HEDW.) J. LANGE & C. JENES.	PERSSON 1962:21
02 5 CAMPYLUM STELLATUM (HEDW.) J. LANGE & C. JENES.	PERSSON 1962:21
04 5 CAMPYLUM STELLATUM (HEDW.) J. LANGE & C. JENES.	PERSSON 1962:21
05 5 CAMPYLUM STELLATUM (HEDW.) J. LANGE & C. JENES.	PERSSON 1962:21
01 4 CATOSCOPIUM NIGRITUM (HEDW.) BRID.	PERSSON 1962:21
03 4 CATOSCOPIUM NIGRITUM BRID.	PERSSON 1952B:264
11 4 CATOSCOPIUM NIGRITUM BRIDEL.	HARVILL 1950:21
03 1 CEPHALOZIA MEDIA LINDB.	PERSSON 1962:7
01 1 CEPHALOZIA PLENICEPS (AUST.) LINDB.	PERSSON 1962:7
03 1 CEPHALOZIA PLENICEPS (AUST.) LINDB.	PERSSON 1952A:7
03 1 CEPHALOZIA PLENICEPS (AUST.) LINDB.	PERSSON 1962:7
05 1 CEPHALOZIELLA ARCTICA BRYHN & DOUIN	PERSSON 1962:7

02 1 CEPHALOZIELLA DIVARICATA (FRANC.) SCHIFFN.	PERSSON 1962:7
03 1 CEPHALOZIELLA DIVARICATA (FRANC.) SCHIFFN.	PERSSON 1962:7
01 1 CEPHALOZIELLA SUBDENTATA WARNST.	PERSSON 1962:7
03 1 CEPHALOZIELLA SUBDENTATA WARNST.	PERSSON 1962:7
05 4 CERATODON HETEROPHYLLUS LINDB. N=13	STEERE 1954A:97
02 4 CERATODON PURPUREUS (HEDW.) BRID.	PERSSON 1962:21
04 4 CERATODON PURPUREUS (HEDW.) BRID.	PERSSON 1962:21
05 4 CERATODON PURPUREUS (H.) BRID. N=13	STEERE 1954A:97
05 4 CERATODON PURPUREUS (HEDW.) BRID.	PERSSON 1962:21
05 1 CHILOSCYPHUS PALLESCENS (EHRH.) DUM.	PERSSON 1962:7
03 4 CINCLIDIUM ARCTICUM (BR. EUR.) SCHP.	PERSSON 1962:21
05 4 CINCLIDIUM ARCTICUM (BRYOL. EUR.) SCHIMP.	PERSSON 1963:11
01 4 CINCLIDIUM LATIFOLIUM LINDB.	PERSSON 1962:21
03 4 CINCLIDIUM LATIFOLIUM LINDB.	PERSSON 1949:520
03 4 CINCLIDIUM LATIFOLIUM LINDB.	PERSSON 1962:21
04 4 CINCLIDIUM LATIFOLIUM LINDB.	PERSSON 1962:21
12 4 CINCLIDIUM LATIFOLIUM LINDB.	STEERE 1953B:33
03 4 CINCLIDIUM SUBROTUNDUM LINDB.	PERSSON 1962:22
04 4 CINCLIDIUM SUBROTUNDUM LINDB. N=14	STEERE 1954A:97
02 5 CIRRIPHYLLUM CIRROSUM (SCHWAEGR.) GROUT	PERSSON 1962:22
03 5 CIRRIPHYLLUM CIRROSUM (SCHWAEGR.) GROUT	PERSSON 1952B:264
04 5 CIRRIPHYLLUM CIRROSUM (SCHWAEGR.) GROUT	PERSSON 1962:22
05 5 CIRRIPHYLLUM CIRROSUM (SCHWAEGR.) GROUT	PERSSON 1952B:264
11 5 CIRRIPHYLLUM CIRROSUM (SCHWAEGR.) GROUT	PERSSON 1952B:264
04 2 CLEVEA HYALINA (SOMMERF.) LINDB.	PERSSON 1962:7
02 5 CLIMACIUM DENDROIDES (HEDW.) W. & M.	PERSSON 1962:22
03 5 CLIMACIUM DENDROIDES (HEDW.) W. & M.	PERSSON 1962:22
03 4 CNESTRUM SCHISTII (WG.) HAG.	PERSSON 1952B:265
05 4 CONOSTOMUM BOREALE SW. N=16	STEERE 1954A:98
02 5 CRATONEURON FILICINUM (HEDW.) ROTH	PERSSON 1962:22
04 5 CRATONEURON FILICINUM (HEDW.) ROTH	PERSSON 1962:22
05 4 CYNODONTIUM ALPESTRE (WAHLENB.) N=14	STEERE 1954A:97
01 4 CYRTOMNIUM HYMENOPHYLLOIDES (HUB.) E. NYHOLM	PERSSON 1962:23
02 4 CYRTOMNIUM HYMENOPHYLLOIDES (HUB.) E. NYHOLM	PERSSON 1962:23
01 4 CYRTOMNIUM HYMENOPHYLLUM (BR. EUR.) K. HOLMEN	PERSSON 1962:23
04 4 CYRTOMNIUM HYMENOPHYLLUM (BR. EUR.) K. HOLMEN	PERSSON 1962:23
02 4 DESMATODON LEUCOSTOMUS (R. BR.) BERGG.	PERSSON 1962:23
04 4 DESMATODON LEUCOSTOMUS (R. BR.) BERGG.	PERSSON 1962:23
03 4 DESMATODON OBLUSIFOLIUS (SCHWAEGR.) JUR.	STEERE 1965:489
03 4 DESMATODON SYSTILIUS BR. & SCH.	PERSSON 1962:23
03 4 DICRANELLA CERVICULATA (HEDW.) SCHP.	PERSSON 1962:23

05 4 DICRANELLA CERVICULATA (H.) SCHIMP. N=15	STEERE 1954A:97
05 4 DICRANELLA CRISPA (H.) SCHP. N=15	STEERE 1954A:97
01 4 DICRANUM ANGUSTUM LINDB.	PERSSON 1962:23
03 4 DICRANUM ANGUSTUM LINDB.	PERSSON 1952B:266
03 4 DICRANUM ANGUSTUM LINDB.	PERSSON 1962:23
05 4 DICRANUM ANGUSTUM LINDB.	PERSSON 1962:23
03 4 DICRANUM BONJEANII DN.	PERSSON 1962:24
01 4 DICRANUM ELONGATUM SCHLEICH.	PERSSON 1962:24
02 4 DICRANUM ELONGATUM SCHLEICH.	PERSSON 1962:24
03 4 DICRANUM ELONGATUM SCHLEICH.	PERSSON 1962:24
04 4 DICRANUM ELONGATUM SCHLEICH. N=13	STEERE 1954A:97
04 4 DICRANUM ELONGATUM SCHLEICH.	PERSSON 1962:24
05 4 DICRANUM ELONGATUM SCHLEICH.	PERSSON 1962:24
01 4 DICRANUM FUSCESCENS TURN.	PERSSON 1962:24
02 4 DICRANUM FUSCESCENS TURN.	PERSSON 1962:24
03 4 DICRANUM FUSCESCENS TURN.	PERSSON 1962:24
04 4 DICRANUM FUSCESCENS TURN.	PERSSON 1962:24
01 4 DICRANUM MAJUS TURN.	PERSSON 1962:24
03 4 DICRANUM MAJUS TURN.	PERSSON 1962:24
04 4 DICRANUM MAJUS TURN.	PERSSON 1962:24
05 4 DICRANUM MAJUS TURN.	PERSSON 1962:24
01 4 DICRANUM MUEHLENBECKII BR. EUR.	PERSSON 1962:24
01 4 DICRANUM SCOPARIUM HEDW.	PERSSON 1962:24
04 4 DIDYMODON RECURVIROSTRIS (HEDW.) JENN. N=13	STEERE 1954A:97
02 1 DIPLOPHYLLUM TAXIFOLIUM (WG.) DUM.	PERSSON 1962:7
01 4 DISTICHUM CAPILLACEUM (HEDW.) BR. & SCH.	PERSSON 1962:24
02 4 DISTICHUM CAPILLACEUM (HEDW.) BR. & SCH.	PERSSON 1962:24
03 4 DISTICHUM CAPILLACEUM (HEDW.) BR. & SCH.	PERSSON 1952B:268
04 4 DISTICHUM CAPILLACEUM (HEDW.) BR. & SCH.	PERSSON 1962:24
05 4 DISTICHUM CAPILLACEUM (H.) BRID. N=14	STEERE 1954A:97
01 4 DISTICHUM FLEXICAULE (SCHLEICH.) HAMPE	PERSSON 1962:24
02 4 DISTICHUM FLEXICAULE (SCHLEICH.) HAMPE	PERSSON 1962:24
03 4 DISTICHUM FLEXICAULE (SCHLEICH.) HAMPE	PERSSON 1962:24
04 4 DISTICHUM FLEXICAULE (SCHLEICH.) HAMPE	PERSSON 1962:24
05 4 DISTICHUM FLEXICAULE (SCHLEICH.) HAMPE	PERSSON 1962:24
03 4 DISTICHUM FLEXICAULE VAR. STERILIS DN.	PERSSON 1962:24
04 4 DISTICHUM FLEXICAULE VAR. STERILIS DN.	PERSSON 1962:24
05 4 DISTICHUM HAGENI RYAN N=42	STEERE 1954A:97
05 4 DISTICHUM INCLINATUM (HEDW.) BR. EUR.	PERSSON 1962:24
04 5 DREPANOCLADUS ADUNCUS (HEDW.) WARNST.	PERSSON 1962:24
05 5 DREPANOCLADUS ADUNCUS (HEDW.) WARNST.	PERSSON 1962:24
01 5 DREPANOCLADUS BADIUS (HN.) ROTH	PERSSON 1962:24
02 5 DREPANOCLADUS BADIUS (HN.) ROTH	PERSSON 1962:24
03 5 DREPANOCLADUS BADIUS (HN.) ROTH	PERSSON 1962:24
11 5 DREPANOCLADUS BADIUS (HN.) ROTH	PERSSON 1952A:105



01 5	DREPANOCLADUS BREVIFOLIUS (LINDB.) WARNST.	PERSSON 1962:24
02 5	DREPANOCLADUS BREVIFOLIUS (LINDB.) WARNST.	PERSSON 1962:24
01 5	DREPANOCLADUS INTERMEDIUS (LINDB.) MONKEM.	PERSSON 1962:24
02 5	DREPANOCLADUS INTERMEDIUS (LINDB.) MONKEM.	PERSSON 1962:24
04 5	DREPANOCLADUS INTERMEDIUS (LINDB.) MONKEM.	PERSSON 1962:24
05 5	DREPANOCLADUS PURPURASCENS (SCHIMP.) LOESKE	PERSSON 1963:13
01 5	DREPANOCLADUS REVOLVENS (SW.) WARNST.	PERSSON 1962:24
04 5	DREPANOCLADUS REVOLVENS (C. MULL.) WARNST. N=22+	STEERE 1954A:98
05 5	DREPANOCLADUS REVOLVENS (SW.) WARNST.	PERSSON 1962:24
03 5	DREPANOCLADUS TRICHOPHYLLUS (WARNST.) MIKUT.	PERSSON 1962:24
03 5	DREPANOCLADUS TUNDRAE (ARN.) LOESKE	PERSSON 1962:25
01 5	DREPANOCLADUS UNCINATUS (HEDW.) WARNST.	PERSSON 1962:25
02 5	DREPANOCLADUS UNCINATUS (HEDW.) WARNST.	PERSSON 1962:25
04 5	DREPANOCLADUS UNCINATUS (HEDW.) WARNST. N=12	STEERE 1954A:98
04 5	DREPANOCLADUS UNCINATUS (HEDW.) WARNST.	PERSSON 1962:25
03 5	DREPANOCLADUS VERNICOSUS (LINDB.) WARNST.	PERSSON 1962:25
05 4	ENCALYPTA ALPINA SMITH N=14	STEERE 1954A:97
03 4	ENCALYPTA BREVICOLLA BRUCH	PERSSON 1952B:269
11 4	ENCALYPTA BREVICOLLA (BRUCH) SCHIMPER	HARVILL 1950:20
03 4	ENCALYPTA PROCERA BRUCH	PERSSON 1962:25
05 4	ENCALYPTA PROCERA BRUCH N=27	STEERE 1954A:97
01 4	ENCALYPTA RHABDOCARPA SCHWAEGR.	PERSSON 1962:25
03 4	ENCALYPTA RHABDOCARPA SCHWAEGR.	PERSSON 1952B:270
03 4	ENCALYPTA RHABDOCARPA SCHWAEGR.	PERSSON 1962:25
05 4	ENCALYPTA RHABDOCARPA SCHWAEGR. N=26	STEERE 1954A:97
01 5	ENTODON ORTHOCARPUS (LA PYL.) LINDB.	PERSSON 1962:25
01 5	EURHYNCHIUM PULCHELLUM (HEDW.) DIX.	PERSSON 1962:25
03 5	EURHYNCHIUM PULCHELLUM (HEDW.) DIX.	PERSSON 1952B:271
03 5	EURHYNCHIUM PULCHELLUM (HEDW.) DIX.	PERSSON 1962:25
04 5	EURHYNCHIUM PULCHELLUM (HEDW.) DIX.	PERSSON 1962:25
11 5	EURHYNCHIUM PULCHELLUM (HEDW.) DIX.	PERSSON 1952B:271
01 4	FISSIDENS OSMUNDIOIDES HEDW.	PERSSON 1962:25
11 1	FRULLANIA JACKII SSP JAPONICA (SANDE LAC.) HATT.	STEERE 1965:491
12 1	FRULLANIA TAMARISCI (L.) DUMORT.	STEERE 1965:489
03 4	FUNARIA ARCTICA (BERGGGR.) KINDB.	PERSSON 1962:25
04 4	FUNARIA ARCTICA (BERGGGR.) KINDB.	PERSSON 1962:25
04 4	FUNARIA MICROSTOMA VAR. OBTUSIFOLIA GROUP N=28	STEERE 1954A:97
02 4	FUNARIA POLARIS BRYHN	STEERE 1963:216
04 4	FUNARIA POLARIS BRYHN	STEERE 1963:216
11 4	FUNARIA POLARIS BRYHN	STEERE 1953B:32
11 4	FUNARIA POLARIS BRYHN	STEERE 1963:216
12 4	FUNARIA POLARIS BRYHN	STEERE 1965:488

12 5 GOLLANIA DENSEPINNATA DIXON	STEERE 1965:491
02 4 GRIMMIA OVALIS HEDW.	PERSSON 1962:27
03 4 GRIMMIA PLAGIOPODIA HEDW.	STEERE 1965:489
11 4 GRIMMIA PLATYPHYLLA MITT. N=14	STEERE 1954A:97
05 4 HAPLODON WORMSKJOLDII (HORNE.) R. BR. N=19	STEERE 1954A:97
05 4 HAPLODON WORMSKJOLDII (HORNE.) R. BR.	PERSSON 1962:27
12 4 HAPLODON WORMSKJOLDII (HORNE.) R. BR.	STEERE 1953B:34
12 4 HAPLODON WORMSKJOLDII (HORNE.) R. BROWN	STEERE 1965:489
02 1 HARPANTHUS FLOTOVIANUS N.	PERSSON 1962:7
12 1 HERBERTA ADUNCA (DICKS.) S. F. GRAY	STEERE 1965:489
02 5 HYGROHYPNUM POLARE (LINDB.) BROTH.	PERSSON 1962:27
11 1 HYGROLEJEUNEA ALASKANA SCHUSTER & STEERE	SCHUSTER & - 1958:1+
12 1 HYGROLEJEUNEA ALASKANA SCHUSTER & STEERE	STEERE 1965:491
01 5 HYLOCOMIUM ALASKANUM (LESQ. & JAMES) LINDB.	PERSSON 1962:27
02 5 HYLOCOMIUM ALASKANUM (LESQ. & JAMES) LINDB.	PERSSON 1962:27
03 5 HYLOCOMIUM ALASKANUM (LESQ. & JAMES) LINDB.	PERSSON 1962:27
04 5 HYLOCOMIUM ALASKANUM (LESQ. & JAMES) LINDB.	PERSSON 1962:27
01 5 HYPNUM BAMBERGERI SCHIMP.	PERSSON 1962:27
02 5 HYPNUM CUPRESSIFORME HEDW.	PERSSON 1962:28
03 5 HYPNUM CUPRESSIFORME HEDW.	PERSSON 1962:28
03 5 HYPNUM PRATENSE KOCH	PERSSON 1962:28
02 5 HYPNUM REVOLUTUM (MITT.) LINDB.	PERSSON 1962:28
03 5 HYPNUM SUBPLICATILE (LINDB.) LIMPR.	PERSSON 1962:28
03 5 HYPNUM VAUCHERI LESQ.	PERSSON 1962:28
02 5 ISOPTERYGIUM PULCHELLUM (HEDW.) BROTH.	PERSSON 1962:28
03 5 ISOPTERYGIUM PULCHELLUM (HEDW.) BROTH.	PERSSON 1962:28
04 5 ISOPTERYGIUM PULCHELLUM (HEDW.) BROTH.	PERSSON 1962:28
05 5 ISOPTERYGIUM PULCHELLUM (HEDW.) BROTH.	PERSSON 1962:28
03 1 LEIOCOLEA SCHULTZII (N.) JORG.	PERSSON 1952A:12
11 1 LEPICOLEA FRYEI PERSS.	STEERE 1953B:33
05 4 LEPTOBRYUM PYRIFORME (HEDW.) SCHP.	PERSSON 1962:28
03 1 LOPHOZIA GROENLANDICA (N.) BRYHN	PERSSON 1962:8
02 1 LOPHOZIA LATIFOLIA SCHUSTER	PERSSON 1962:8
04 1 LOPHOZIA LATIFOLIA SCHUSTER	PERSSON 1962:8
04 1 LOPHOZIA PELLUCIDA SCHUSTER	PERSSON 1962:8
02 1 LOPHOZIA VENTRICOSA (DICKS.) DUM.	PERSSON 1962:9
04 1 LOPHOZIA VENTRICOSA (DICKS.) DUM.	PERSSON 1962:9
05 1 LOPHOZIA VENTRICOSA (DICKS.) DUM.	PERSSON 1962:9

01 2 MARCHANTIA ALPESTRIS N.	PERSSON 1962:9
02 2 MARCHANTIA POLYMORPHA L.	PERSSON 1962:9
03 2 MARCHANTIA POLYMORPHA L.	PERSSON 1962:9
05 2 MARCHANTIA POLYMORPHA L.	PERSSON 1962:9
03 4 MEESIA TRIQUETRA (HOOK. & TAYL.) ANGSTR.	PERSSON 1962:28
04 4 MEESIA TRIQUETRA (HOOK. & TAYL.) ANGSTR. N=10	STEERE 1954A:98
01 4 MEESIA ULIGINOSA HEDW.	PERSSON 1962:28
01 1 MESOPTYCHIA SAHLBERGII (LINDB.) EVS.	PERSSON 1962:9
03 1 MESOPTYCHIA SAHLBERGII (LINDB.) EVS.	PERSSON 1949:510
03 1 MESOPTYCHIA SAHLBERGII (LINDB.) EVS.	PERSSON 1962:9
01 4 MNIUM ANDREWSIANUM STEERE	PERSSON 1962:28
02 4 MNIUM ANDREWSIANUM STEERE	STEERE 1958C:173
03 4 MNIUM ANDREWSIANUM STEERE	STEERE 1958C:173
04 4 MNIUM ANDREWSIANUM STEERE	STEERE 1958C:173
05 4 MNIUM ANDREWSIANUM STEERE	STEERE 1958C:173
05 4 MNIUM ANDREWSIANUM STEERE	PERSSON 1963:16
11 4 MNIUM ANDREWSIANUM STEERE	STEERE 1958C:173
02 4 MNIUM MEDIUM BR. & SCH.	PERSSON 1962:28
02 4 MNIUM OTHORRHYNCHUM BR. EUR.	PERSSON 1962:28
01 4 MNIUM RUGICUM LAUR.	PERSSON 1962:29
04 4 MNIUM RUGICUM LAUR.	PERSSON 1962:29
05 4 MNIUM RUGICUM LAUR.	PERSSON 1962:29
02 4 MNIUM SERRATUM BRID.	PERSSON 1962:29
01 4 MNIUM SPINULOSUM (BR. & SCH.)	PERSSON 1962:29
04 4 MNIUM SPINULOSUM (BR. & SCH.)	PERSSON 1962:29
03 4 MOLENDIA SENDNERIANA (B.S.G.) LIMPR.	STEERE 1965:489
03 1 MYLIA ANOMALA (HOOK.) GRAY	PERSSON 1962:9
02 5 MYURELLA APICULATA (HUB.) BRUCH	PERSSON 1962:29
03 5 MYURELLA APICULATA (HUB.) BRUCH	PERSSON 1962:29
04 5 MYURELLA APICULATA (HUB.) BRUCH	PERSSON 1962:29
01 5 MYURELLA JULACEA BR. & SCH.	PERSSON 1962:29
02 5 MYURELLA JULACEA BR. & SCH.	PERSSON 1962:29
03 5 MYURELLA JULACEA BR. & SCH.	PERSSON 1962:29
05 5 MYURELLA JULACEA BR. & SCH.	PERSSON 1962:29
03 5 MYURELLA SIBIRICA (C. M.) REIM.	PERSSON 1962:29
02 5 NECKERA OLIGOCARPA BRUCH	STEERE 1965:489
11 5 NECKERA OLIGOCARPA BRUCH	STEERE 1965:489
02 4 OLIGOTRICHUM FALCATUM STEERE	STEERE 1958A:115
05 4 ONCOPHORUS VIRENS (HEDW.) BRID. N=14	STEERE 1954A:97
01 4 ONCOPHORUS WAHLENBERGII BRID.	PERSSON 1962:29
02 4 OREAS MARTIANA (HOPPE & HORNESCH.) BRID.	STEERE 1958B:119

01 1 ORTHOCAULIS BINSTAEDII (KAAL.) BUCH	PERSSON 1962:9
03 1 ORTHOCAULIS BINSTAEDII (KAAL.) BUCH	PERSSON 1962:9
01 1 ORTHOCAULIS KUNZEANUS (HUB.) BUCH	PERSSON 1962:10
03 1 ORTHOCAULIS KUNZEANUS (HUB.) BUCH	PERSSON 1952A:17
03 1 ORTHOCAULIS KUNZEANUS (HUB.) BUCH	PERSSON 1962:10
02 1 ORTHOCAULIS QUADRILOBUS (LINDB.) BUCH	PERSSON 1962:10
03 1 ORTHOCAULIS QUADRILOBUS (LINDB.) BUCH	PERSSON 1952A:17
05 1 ORTHOCAULIS QUADRILOBUS (LINDB.) BUCH	PERSSON 1952A:17
01 5 ORTHOTHECIUM CHRYSSEUM (SCHWAEGR.) BR. & SCH.	PERSSON 1962:29
02 5 ORTHOTHECIUM CHRYSSEUM (SCHWAEGR.) BR. & SCH.	PERSSON 1962:29
04 5 ORTHOTHECIUM CHRYSSEUM (SCHWAEGR.) BR. & SCH.	PERSSON 1962:29
05 5 ORTHOTHECIUM CHRYSSEUM (SCHWAEGR.) BR. & SCH.	PERSSON 1962:29
11 5 ORTHOTHECIUM STRICTUM LOR.	PERSSON 1946:56
11 4 ORTHOTRICHUM CUPULATUM (HOFFM.) BRID. N=11	STEERE 1954A:98
02 4 PHILOCRYA ASPERA HAGEN & JENSEN	STEERE 1956:161
11 4 PHILOCRYA ASPERA HAGEN & JENSEN	STEERE 1956:161
03 4 PHILONOTIS TOMENTELLA MOL.	PERSSON 1962:29
01 1 PLAGIOCHILA ARCTICA BRYHN & KAALAAS	PERSSON 1962:10
03 1 PLAGIOCHILA ARCTICA BRYHN & KAALAAS	PERSSON 1962:10
04 1 PLAGIOCHILA ARCTICA BRYHN & KAALAAS	PERSSON 1962:10
05 1 PLAGIOCHILA ARCTICA BRYHN & KAALAAS	PERSSON 1962:10
05 5 PLAGIOTHECIUM DENTICULATUM (HEDW.) BR. & SCH.	PERSSON 1962:29
03 5 PLEUROZIIUM SCHREBERI (WILLD.) MITT.	PERSSON 1962:29
04 5 PLEUROZIIUM SCHREBERI (WILLD.) MITT.	PERSSON 1962:29
01 4 POGONATUM ALPINUM HEDW.	PERSSON 1962:29
02 4 POGONATUM ALPINUM HEDW.	PERSSON 1962:29
04 4 POGONATUM ALPINUM HEDW.	PERSSON 1962:29
05 4 POGONATUM ALPINUM VAR. SEPTENTRIONALE (-) N=7	STEERE 1954A:98
05 4 POGONATUM CAPILLARE (MICHX.) BRID. N = 7	STEERE 1954A:98
04 4 POHLIA ALBICANS (WG.) LINDB.	PERSSON 1962:29
01 4 POHLIA CRUDA HEDW.	PERSSON 1962:29
04 4 POHLIA CRUDA HEDW.	PERSSON 1962:29
05 4 POHLIA CRUDA (HEDW.) LINDB. N=10	STEERE 1954A:97
05 4 POHLIA CRUDA HEDW.	PERSSON 1962:29
02 4 POHLIA NUTANS HEDW.	PERSSON 1962:29
05 4 POHLIA NUTANS (HEDW.) LINDB. N=21	STEERE 1954A:97
05 4 POHLIA NUTANS HEDW.	PERSSON 1962:29
02 4 POHLIA PROLIGERA LINDB.	PERSSON 1962:29
03 4 POHLIA PROLIGERA LINDB.	PERSSON 1962:29
04 4 POHLIA PROLIGERA LINDB.	PERSSON 1962:29
04 4 POHLIA SPHAGNICOLA (B. & S.) LINDB. & ARN.	PERSSON 1962:30
01 4 POLYTRICHUM AFFINE FUNCK	PERSSON 1962:30

03 4 POLYTRICHUM AFFINE FUNCK	PERSSON 1962:30
04 4 POLYTRICHUM ALPESTRE HOPPE & HSCH. N=7	STEERE 1954A:98
03 4 POLYTRICHUM HYPERBOREUM R. BR.	PERSSON 1962:30
02 4 POLYTRICHUM JENSENII HAG.	PERSSON 1962:30
04 4 POLYTRICHUM JENSENII HAG.	PERSSON 1962:30
11 4 POLYTRICHUM NORVEGICUM HEDW.	HARVILL 1950:25
04 4 POLYTRICHUM PILIFERUM HEDW.	PERSSON 1962:30
04 4 POTTIA OBTUSA (R. BR.) C. M.	PERSSON 1962:30
05 4 POTTIA OBTUSA (R. BR.) C. M.	PERSSON 1962:30
05 4 POTTIA OBTUSIFOLIA (R. BR.) C. MULL. N=50	STEERE 1954A:97
01 2 PREISSIA QUADRATA (SCOP.) N.	PERSSON 1962:10
04 2 PREISSIA QUADRATA (SCOP.) N.	PERSSON 1962:10
05 4 PSILOPILUM CAVIFOLIUM (WILS.) HAGEN N=7	STEERE 1954A:98
02 4 PTERYGONEURUM ARCTICUM STEERE	STEERE 1959:215
03 4 PTERYGONEURUM ARCTICUM STEERE	STEERE 1959:215
11 4 PTERYGONEURUM ARCTICUM STEERE	STEERE 1959:215
12 4 PTERYGONEURUM ARCTICUM STEERE	STEERE 1965:489
01 1 PTILIDIUM CILIARE (L.) HAMPE	PERSSON 1962:10
02 1 PTILIDIUM CILIARE (L.) HAMPE	PERSSON 1962:10
04 1 PTILIDIUM CILIARE (L.) HAMPE	PERSSON 1962:10
02 1 RADULA COMPLANATA (L.) DUMORT.	STEERE 1965:489
11 1 RADULA COMPLANATA (L.) DUMORT.	STEERE 1965:489
12 1 RADULA PROLIFERA ARNELL	STEERE 1953B:33
02 4 RHACOMITRIUM CANESCENS (HEDW.) BRID.	PERSSON 1962:30
04 4 RHACOMITRIUM CANESCENS (HEDW.) BRID.	PERSSON 1962:30
01 4 RHACOMITRIUM LANUGINOSUM (HEDW.) BRID.	PERSSON 1962:31
02 4 RHACOMITRIUM LANUGINOSUM (HEDW.) BRID.	PERSSON 1962:31
03 4 RHACOMITRIUM LANUGINOSUM (HEDW.) BRID.	PERSSON 1962:31
01 5 RHYTIDIUM RUGOSUM (HEDW.) KINDB.	PERSSON 1962:31
02 5 RHYTIDIUM RUGOSUM (HEDW.) KINDB.	PERSSON 1962:31
04 5 RHYTIDIUM RUGOSUM (HEDW.) KINDB.	PERSSON 1962:31
01 2 RICCARDIA LATIFRONS LINDB.	PERSSON 1962:10
03 2 RICCARDIA LATIFRONS LINDB.	PERSSON 1952A:21
03 2 RICCARDIA LATIFRONS LINDB.	PERSSON 1962:10
04 4 SAELANIA GLAUDESCENS (H.) BROTH. N=13	STEERE 1954A:97
01 1 SCAPANIA GYMNSTOMOPHILA KAAL.	PERSSON 1962:10
05 1 SCAPANIA IRRIGUA (N.) DUM.	PERSSON 1962:10
05 1 SCAPANIA MUCRONATA BUCH	PERSSON 1963:8
03 1 SCAPANIA PALUDICOLA LOESKE & K. M.	PERSSON 1952A:22
03 1 SCAPANIA PALUDICOLA LOESKE & K. M.	PERSSON 1962:12

05 1 SCAPANIA PALUDICOLA LOESKE & K. M.	PERSSON 1962:12
02 1 SCAPANIA PRAETERVISA MEYLAN	PERSSON 1962:12
12 1 SCAPANIA SIMMONSII BRYHN	STEERE 1953B:33
03 4 SCHISTIDIUM APOCARPUM (HEDW.) BR. & SCH.	PERSSON 1962:31
02 4 SCHISTIDIUM PLATYPHYLLUM (MITT.) H. PERSS.	PERSSON 1962:31
02 4 SCHISTIDIUM STRICTUM (TURN.) LOESKE EX O. MART.	PERSSON 1962:31
03 5 SCORPIDIUM SCORPIOIDES (HEDW.) BR. & SCH.	PERSSON 1962:31
11 4 SELIGERIA CAMPYLOPODA KINDB.	STEERE 1965:489
03 4 SELIGERIA DIVERSIFOLIA LINDB.	STEERE 1965:489
11 4 SELIGERIA DIVERSIFOLIA LINDB.	STEERE 1965:489
01 4 SELIGERIA PUSILLA (HEDW.) B.S.G.	STEERE 1965:490
03 4 SELIGERIA PUSILLA (HEDW.) B.S.G.	STEERE 1965:490
11 4 SELIGERIA PUSILLA (HEDW.) B.S.G.	STEERE 1965:490
03 3 SPHAGNUM AONGSTROEMII HN.	PERSSON 1949:517
03 3 SPHAGNUM BALTICUM RUSS.	PERSSON 1952A:88
03 3 SPHAGNUM BALTICUM RUSS.	PERSSON 1962:15
01 3 SPHAGNUM FIMBRIATUM WILS.	PERSSON 1962:15
03 3 SPHAGNUM FIMBRIATUM WILS.	PERSSON 1962:15
01 3 SPHAGNUM FUSCUM KLINGGR.	PERSSON 1962:15
03 3 SPHAGNUM FUSCUM KLINGGR.	PERSSON 1962:15
02 3 SPHAGNUM GIRGENSOHNII RUSS.	PERSSON 1962:15
04 3 SPHAGNUM GIRGENSOHNII RUSS.	PERSSON 1962:15
05 3 SPHAGNUM GIRGENSOHNII RUSS.	PERSSON 1962:15
03 3 SPHAGNUM IMBRICATUM HORNSCH.	PERSSON 1949:513
03 3 SPHAGNUM IMBRICATUM HORNSCH.	PERSSON 1962:15
04 3 SPHAGNUM IMBRICATUM HORNSCH.	PERSSON 1962:15
01 3 SPHAGNUM LENENSE H. LINDB.	PERSSON 1962:15
03 3 SPHAGNUM LENENSE H. LINDB.	PERSSON 1949:513
03 3 SPHAGNUM LENENSE H. LINDB.	PERSSON 1962:15
01 3 SPHAGNUM RUBELLUM WILS.	PERSSON 1962:16
04 3 SPHAGNUM RUBELLUM WILS.	PERSSON 1962:16
01 3 SPHAGNUM SQUAKROSUM PERS.	PERSSON 1962:16
03 3 SPHAGNUM SQUAKROSUM PERS.	PERSSON 1962:16
05 3 SPHAGNUM SQUAKROSUM PERS.	PERSSON 1962:16
03 3 SPHAGNUM SUBSECUNDUM N.	PERSSON 1962:16
02 3 SPHAGNUM TERES ANGSTR.	PERSSON 1962:17
03 3 SPHAGNUM TERES ANGSTR.	PERSSON 1962:17
03 3 SPHAGNUM WARNSTORFIANUM DU RIETZ.	PERSSON 1962:17
01 1 SPHENOLOBUS MINUTUS (CRANTZ) ST.	PERSSON 1962:14
03 1 SPHENOLOBUS MINUTUS (CR.) ST.	PERSSON 1952A:24

03 1 SPHENOLOBUS MINUTUS (CRANTZ) ST.	PERSSON 1962:14
04 1 SPHENOLOBUS MINUTUS (CRANTZ) ST.	PERSSON 1962:14
11 1 SPHENOLOBUS MINUTUS (CR.) ST.	PERSSON 19524:24
03 4 SPLACHNUM OVATUM HEDW.	PERSSON 1962:31
05 4 SPLACHNUM VASCULOSUM HEDW. N=9	STEERE 1954A:97
05 4 SPLACHNUM VASCULOSUM HEDW.	PERSSON 1962:31
03 4 STEGONIA LATIFOLIA VAR. PILIFERA (BRID.) BROTH.	PERSSON 1962:31
02 1 TEMNOMA SETIFORME (EHRH.) HOWE	PERSSON 1962:14
03 4 TETRAPHIS PELLUCIDA HEDW.	STEERE 1965:490
01 4 TETRAPLODON MNIOIDES HEDW.	PERSSON 1962:31
04 4 TETRAPLODON MNIOIDES HEDW.	PERSSON 1962:31
05 4 TETRAPLODON MNIOIDES (HEDW.) B.S.G. N=19	STEERE 1954A:97
03 4 TETRODONTIUM BROWNIANUM (DICKS.) SCHWAEGR.	STEERE 1965:490
02 5 THUIDIUM PHILIBERTII LIMPR.	PERSSON 1962:32
03 5 THUIDIUM PHILIBERTII LIMPR.	PERSSON 1962:32
01 4 TIMMIA AUSTRIACA HEDW.	PERSSON 1962:32
02 4 TIMMIA AUSTRIACA HEDW.	PERSSON 1962:32
04 4 TIMMIA AUSTRIACA HEDW.	PERSSON 1962:32
01 5 TOMENTHYPNUM NITENS (HEDW.) LOESKE	PERSSON 1962:32
02 5 TOMENTHYPNUM NITENS (HEDW.) LOESKE	PERSSON 1962:32
03 5 TOMENTHYPNUM NITENS (HEDW.) LOESKE	PERSSON 1962:32
01 4 TORTELLA TORTUOSA (HEDW.) LIMPR.	PERSSON 1962:32
04 4 TORTULA MUCRONIFOLIA SCHWAEGR.	PERSSON 1962:32
05 4 TORTULA MUCRONIFOLIA SCHWAEGR. N=30	STEERE 1954A:97
01 4 TORTULA RURALIS (HEDW.) SCHWAEGR.	PERSSON 1962:32
02 4 TORTULA RURALIS (HEDW.) SCHWAEGR.	PERSSON 1962:32
03 4 TORTULA RURALIS (HEDW.) SCHWAEGR.	PERSSON 1962:32
05 4 TORTULA RURALIS (HEDW.) SCHWAEGR.	PERSSON 1962:32
05 4 TRICHODON CYLINDRICUS (H.) SCH. N=12	STEERE 1954A:97
01 1 TRITOMARIA QUINQUEDENTATA (HUDS.) BUCH	PERSSON 1962:14
02 1 TRITOMARIA QUINQUEDENTATA (HUDS.) BUCH	PERSSON 1962:14
04 1 TRITOMARIA QUINQUEDENTATA (HUDS.) BUCH	PERSSON 1962:14
05 1 TRITOMARIA QUINQUEDENTATA (HUDS.) BUCH	PERSSON 1962:14
11 4 VOITIA HYPERBOREA GREV. & ARN.	STEERE 1953B:34
12 4 VOITIA HYPERBOREA GREV. & ARNOTT.	STEERE 1965:489